

IN THE CLAIMS:

Claim 1 (original): A carbonator, comprising:

- an oblong shaped housing;
- a liquid inlet port disposed on the housing for inletting a liquid from a liquid source;
- a gas inlet port disposed on the housing for inletting gas from a gas source; and
- an exit port disposed on the housing.

Claim 2 (original): The carbonator according to claim 1, wherein the oblong shaped housing creates an increased gas/liquid interaction area for absorption by the liquid.

Claim 3 (original): The carbonator according to claim 1, wherein the gas is carbon dioxide.

Claim 4 (original): The carbonator according to claim 1, wherein the liquid is water.

Claim 5 (original): The carbonator according to claim 2, wherein the mixture exiting the carbonator is carbonated water.

Claim 6 (original): The carbonator according to claim 1, wherein the housing comprises an oblong shell and two ends.

Claim 7 (original): The carbonator according to claim 6, wherein the oblong shell provides an increased exterior surface area, thereby increasing the heat removal capability.

Claim 8 (original): The carbonator according to claim 6, wherein the oblong shell provides a reduced vertical height component, thereby decreasing the surrounding cold plate thickness requirement.

Claim 9 (original): The carbonator according to claim 1, wherein the liquid and gas mixture is removed through the exit port.

Claim 10 (currently amended): A carbonator, comprising:

    a housing;

    a film generator assembly disposed in the housing, the film generator assembly including a hemispherical redirector coupled to a cylindrical film generator, wherein the hemispherical redirector includes an inner surface, and further wherein, the cylindrical film generator includes apertures to aid the liquid in taking the shape of a film;

    a gas inlet port disposed on the housing, the gas inlet port coupled with a gas source for communicating gas into the housing;

    a liquid inlet port disposed on the housing, the liquid inlet port coupled with a liquid source for communicating liquid onto the inner surface of the hemispherical redirector to the film generator assembly, wherein the fluid contacts the inner surface and is redirected onto the cylindrical film generator, thereby forcing assembly forces the liquid into to a film as the liquid moves down the cylindrical film generator, thereby maximizing to maximize the liquid/gas interaction area; and

    an outlet port disposed on the housing for delivery of a liquid/gas mixture exterior to the housing.

Claim 11 (original): The carbonator according to claim 10, wherein the gas is carbon dioxide.

Claim 12 (original): The carbonator according to claim 10, wherein the liquid is water.

Claim 13 (original): The carbonator according to claim 10, wherein the mixture exiting the carbonator is carbonated water.

Claim 14-17 (canceled).

Claim 18 (currently amended): A method of increasing the surface area of a liquid for mixing with a gas, comprising:

- a. placing a film generator assembly in a chamber filler with a pressurized gas, wherein the film generator assembly comprises a hemispherical redirector coupled with a cylindrical film generator;
- b. a. spraying the liquid onto an inner surface of a hemispherical redirector into a film generator assembly disposed in a chamber filled with a pressurized gas;
- c. redirecting the sprayed fluid towards the cylindrical film generator;
- d. b. generating a film as the liquid moves over the a film generator.

Claim 19 (currently amended): The method according to claim 18, further comprising:

- e. e. absorbing the higher pressure gas into an increased exposed surface area of the liquid.

Claim 20 (canceled).

Claim 21 (original): The method according to claim 18, wherein the film generator includes apertures to promote the generation of a liquid film.

Claim 22-23 (canceled).

Claim 24 (original): The method of claim 18, wherein the liquid is water.

Claim 25 (original): The method of claim 18, wherein the gas is carbon dioxide.

Claim 26-32 (canceled).